Christian Steinhauser

List of Publications by Citations

127 papers	10,152 citations	52 h-index	100 g-index
134 ext. papers	11,829 ext. citations	7 avg, IF	6.24 L-index

#	Paper	IF	Citations
127	Astrocyte dysfunction in neurological disorders: a molecular perspective. *Nature Reviews Neuroscience*, **2006**, 7, 194-206	13.5	591
126	Astrocytes contain a vesicular compartment that is competent for regulated exocytosis of glutamate. *Nature Neuroscience*, **2004**, 7, 613-20	25.5	578
125	Brain tumour cells interconnect to a functional and resistant network. *Nature*, **2015**, 528, 93-8	50.4	496
124	The impact of astrocytic gap junctional coupling on potassium buffering in the hippocampus. *Journal of Neuroscience*, **2006**, 26, 5438-47	6.6	446
123	Astrocytes: a central element in neurological diseases. *Acta Neuropathologica*, **2016**, 131, 323-45	14.3	436
122	Ion channels in glial cells. *Brain Research Reviews*, **2000**, 32, 380-412		410
121	Segregated expression of AMPA-type glutamate receptors and glutamate transporters defines distinct astrocyte populations in the mouse hippocampus. *Journal of Neuroscience*, **2003**, 23, 1750-8	6.6	383
120	Reactive astrocyte nomenclature, definitions, and future directions. *Nature Neuroscience*, **2021**, 24, 312-325	25.5	298
119	News on glutamate receptors in glial cells. *Trends in Neurosciences*, **1996**, 19, 339-45	13.3	292
118	Functional changes in astroglial cells in epilepsy. *Glia*, **2006**, 54, 358-68	9	244
117	Connexin 47 (Cx47)-deficient mice with enhanced green fluorescent protein reporter gene reveal predominant oligodendrocytic expression of Cx47 and display vacuolized myelin in the CNS. *Journal of Neuroscience*, **2003**, 23, 4549-59	6.6	224
116	Accelerated hippocampal spreading depression and enhanced locomotory activity in mice with astrocyte-directed inactivation of connexin43. *Journal of Neuroscience*, **2003**, 23, 766-76	6.6	223
115	Astrocytes in the hippocampus of patients with temporal lobe epilepsy display changes in potassium conductances. *European Journal of Neuroscience*, **2000**, 12, 2087-96	3.5	215
114	Astrocyte dysfunction in epilepsy. *Brain Research Reviews*, **2010**, 63, 212-21		186
113	Astrocyte uncoupling as a cause of human temporal lobe epilepsy. *Brain*, **2015**, 138, 1208-22	11.2	181
112	Analysis of astroglial K+ channel expression in the developing hippocampus reveals a predominant role of the Kir4.1 subunit. *Journal of Neuroscience*, **2009**, 29, 7474-88	6.6	174
111	Seizures preferentially stimulate proliferation of radial glia-like astrocytes in the adult dentate gyrus: functional and immunocytochemical analysis. *European Journal of Neuroscience*, **2003**, 18, 2769-78	3.5	157

110	Distinct types of astroglial cells in the hippocampus differ in gap junction coupling. *Glia*, **2004**, 48, 36-43	9	155
109	Developmental regulation of Na+ and K+ conductances in glial cells of mouse hippocampal brain slices. *Glia*, **1995**, 15, 173-87	9	138
108	Neuron-glia synapses in the brain. *Brain Research Reviews*, **2010**, 63, 130-7		135
107	Astrocyte dysfunction in temporal lobe epilepsy: K+ channels and gap junction coupling. *Glia*, **2012**, 60, 1192-202	9	132
106	Synaptic transmission onto hippocampal glial cells with hGFAP promoter activity. *Journal of Cell Science*, **2005**, 118, 3791-803	5.3	129
105	Distribution of P2X receptors on astrocytes in juvenile rat hippocampus. *Glia*, **2001**, 36, 11-21	9	129
104	Role of astrocytes in epilepsy. *Cold Spring Harbor Perspectives in Medicine*, **2015**, 5, a022434	5.4	127
103	Commonalities in epileptogenic processes from different acute brain insults: Do they translate?. *Epilepsia*, **2018**, 59, 37-66	6.4	123
102	Functional and molecular properties of human astrocytes in acute hippocampal slices obtained from patients with temporal lobe epilepsy. *Epilepsia*, **2000**, 41 Suppl 6, S181-4	6.4	120
101	Glial cells in the mouse hippocampus express AMPA receptors with an intermediate Ca2+ permeability. *European Journal of Neuroscience*, **1995**, 7, 1872-81	3.5	117
100	Impact of aquaporin-4 channels on K+ buffering and gap junction coupling in the hippocampus. *Glia*, **2011**, 59, 973-80	9	115
99	Glial modulation of synaptic transmission in the hippocampus. *Glia*, **2004**, 47, 249-57	9	114
98	Connexin expression by radial glia-like cells is required for neurogenesis in the adult dentate gyrus. *Proceedings of the National Academy of Sciences of the United States of America*, **2009**, 106, 11336-41	11.5	111
97	Neuron-astrocyte signaling and epilepsy. *Experimental Neurology*, **2013**, 244, 4-10	5.7	98
96	Kainate activates Ca(2+)-permeable glutamate receptors and blocks voltage-gated K+ currents in glial cells of mouse hippocampal slices. *Pflugers Archiv European Journal of Physiology*, **1994**, 426, 310-9	4.6	96
95	Glial membrane channels and receptors in epilepsy: impact for generation and spread of seizure activity. *European Journal of Pharmacology*, **2002**, 447, 227-37	5.3	95
94	Effects of phenytoin, carbamazepine, and gabapentin on calcium channels in hippocampal granule cells from patients with temporal lobe epilepsy. *Epilepsia*, **1998**, 39, 355-63	6.4	94
93	AMPA receptor-mediated modulation of inward rectifier K+ channels in astrocytes of mouse hippocampus. *Molecular and Cellular Neurosciences*, **2002**, 19, 447-58	4.8	92

92	Astrocytic function and its alteration in the epileptic brain. *Epilepsia*, **2008**, 49 Suppl 2, 3-12	6.4	90
91	Epilepsy and astrocyte energy metabolism. *Glia*, **2018**, 66, 1235-1243	9	89
90	NG2-expressing cells in the nervous system revealed by the NG2-EYFP-knockin mouse. *Genesis*, **2008**, 46, 743-57	1.9	88
89	Characterization of Panglial Gap Junction Networks in the Thalamus, Neocortex, and Hippocampus Reveals a Unique Population of Glial Cells. *Cerebral Cortex*, **2015**, 25, 3420-33	5.1	84
88	Gray matter NG2 cells display multiple Ca2+-signaling pathways and highly motile processes. *PLoS ONE*, **2011**, 6, e17575	3.7	80
87	Identified glial cells in the early postnatal mouse hippocampus display different types of Ca2+ currents. *Glia*, **1996**, 17, 181-94	9	75
86	Ionotropic glutamate receptors in astrocytes. *Progress in Brain Research*, **2001**, 132, 287-99	2.9	73
85	Enhanced relative expression of glutamate receptor 1 flip AMPA receptor subunits in hippocampal astrocytes of epilepsy patients with Ammon's horn sclerosis. *Journal of Neuroscience*, **2004**, 24, 1996-2003	6.6	71
84	Properties of voltage-activated Na+ and K+ currents in mouse hippocampal glial cells in situ and after acute isolation from tissue slices. *Pflugers Archiv European Journal of Physiology*, **1994**, 428, 610-20	4.6	71
83	Role of astroglial connexin30 in hippocampal gap junction coupling. *Glia*, **2011**, 59, 511-9	9	67
82	Lack of P2X receptor mediated currents in astrocytes and GluR type glial cells of the hippocampal CA1 region. *Glia*, **2007**, 55, 1648-55	9	66
81	Oligodendrocytes in the Mouse Corpus Callosum Maintain Axonal Function by Delivery of Glucose. *Cell Reports*, **2018**, 22, 2383-2394	10.6	64
80	AMPA receptor subunits expressed by single astrocytes in the juvenile mouse hippocampus. *Molecular Brain Research*, **1997**, 47, 286-94		64
79	Mechanisms underlying blood-brain barrier dysfunction in brain pathology and epileptogenesis: role of astroglia. *Epilepsia*, **2012**, 53 Suppl 6, 53-9	6.4	62
78	Analysis of AMPA receptor properties during postnatal development of mouse hippocampal astrocytes. *Journal of Neurophysiology*, **1997**, 78, 2916-23	3.2	62
77	Classification of projection neurons and interneurons in the rat lateral amygdala based upon cluster analysis. *Molecular and Cellular Neurosciences*, **2006**, 33, 57-67	4.8	61
76	Versatile and simple approach to determine astrocyte territories in mouse neocortex and hippocampus. *PLoS ONE*, **2013**, 8, e69143	3.7	54
75	Lesion-induced changes of electrophysiological properties in astrocytes of the rat dentate gyrus **1999**, 28, 166-174		51

74	Functional redundancy and compensation among members of gap junction protein families?. *Biochimica Et Biophysica Acta - Biomembranes*, **2012**, 1818, 1971-84	3.8	46
73	Subcellular reorganization and altered phosphorylation of the astrocytic gap junction protein connexin43 in human and experimental temporal lobe epilepsy. *Glia*, **2017**, 65, 1809-1820	9	45
72	Plaque-dependent morphological and electrophysiological heterogeneity of microglia in an Alzheimer's disease mouse model. *Glia*, **2018**, 66, 1464-1480	9	43
71	Heterogeneity in expression of functional ionotropic glutamate and GABA receptors in astrocytes across brain regions: insights from the thalamus. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2014**, 369, 20130602	5.8	43
70	Spatial properties of astrocyte gap junction coupling in the rat hippocampus. *Philosophical Transactions of the Royal Society B: Biological Sciences*, **2014**, 369, 20130600	5.8	43
69	Rapid sodium signaling couples glutamate uptake to breakdown of ATP in perivascular astrocyte endfeet. *Glia*, **2017**, 65, 293-308	9	42
68	Changes in flip/flop splicing of astroglial AMPA receptors in human temporal lobe epilepsy. *Epilepsia*, **2002**, 43 Suppl 5, 162-7	6.4	41
67	Novel astrocyte targets: new avenues for the therapeutic treatment of epilepsy. *Neuroscientist*, **2015**, 21, 62-83	7.6	40
66	Albumin is taken up by hippocampal NG2 cells and astrocytes and decreases gap junction coupling. *Epilepsia*, **2012**, 53, 1898-906	6.4	40
65	Altered Kir and gap junction channels in temporal lobe epilepsy. *Neurochemistry International*, **2013**, 63, 682-7	4.4	37
64	Postnatal down-regulation of the GABAA receptor δ subunit in neocortical NG2 cells accompanies synaptic-to-extrasynaptic switch in the GABAergic transmission mode. *Cerebral Cortex*, **2015**, 25, 1114-23	5.1	36
63	Expression of the δ-subunit distinguishes synaptic and extrasynaptic GABA(A) receptors in NG2 cells of the hippocampus. *Journal of Neuroscience*, **2013**, 33, 12030-40	6.6	35
62	Analysis of ion channel expression by astrocytes in red nucleus brain stem slices of the rat. *Glia*, **1997**, 19, 234-246	9	35
61	Diversity of astrocyte potassium channels: An update. *Brain Research Bulletin*, **2018**, 136, 26-36	3.9	34
60	Kir4.1 channels mediate a depolarization of hippocampal astrocytes under hyperammonemic conditions in situ. *Glia*, **2012**, 60, 965-78	9	32
59	Chemically-induced TLE models: Topical application. *Journal of Neuroscience Methods*, **2016**, 260, 53-61	3	31
58	Electrophysiologic characteristics of glial cells. *Hippocampus*, **1993**, 3, 113-123	3.5	25
57	Changes in splice variant expression and subunit assembly of AMPA receptors during maturation of hippocampal astrocytes. *Molecular and Cellular Neurosciences*, **2003**, 22, 248-58	4.8	24

56	Germ-line recombination activity of the widely used hGFAP-Cre and nestin-Cre transgenes. *PLoS ONE*, **2013**, 8, e82818	3.7	23
55	Properties of human astrocytes and NG2 glia. *Glia*, **2020**, 68, 756-767	9	23
54	Physiological impact of CB1 receptor expression by hippocampal GABAergic interneurons. *Pflugers Archiv European Journal of Physiology*, **2016**, 468, 727-37	4.6	22
53	Dual reporter approaches for identification of Cre efficacy and astrocyte heterogeneity. *FASEB Journal*, **2012**, 26, 4576-83	0.9	22
52	Experimental febrile seizures impair interastrocytic gap junction coupling in juvenile mice. *Journal of Neuroscience Research*, **2016**, 94, 804-13	4.4	21
51	Polarized distribution of AMPA, but not GABAA , receptors in radial glia-like cells of the adult dentate gyrus. *Glia*, **2013**, 61, 1146-54	9	20
50	Changes in the proliferative capacity of NG2 cell subpopulations during postnatal development of the mouse hippocampus. *Brain Structure and Function*, **2017**, 222, 831-847	4	19
49	Quality control of astrocyte-directed Cre transgenic mice: the benefits of a direct link between loss of gene expression and reporter activation. *Glia*, **2009**, 57, 680-92	9	19
48	Connexin-43 Gap Junctions Are Responsible for the Hypothalamic Tanycyte-Coupled Network. *Frontiers in Cellular Neuroscience*, **2018**, 12, 406	6.1	19
47	The proapoptotic BCL-2 homology domain 3-only protein Bim is not critical for acute excitotoxic cell death. *Journal of Neuropathology and Experimental Neurology*, **2009**, 68, 102-10	3.1	18
46	Ca-permeable AMPA receptors in mouse olfactory bulb astrocytes. *Scientific Reports*, **2017**, 7, 44817	4.9	17
45	Functional anisotropic panglial networks in the lateral superior olive. *Glia*, **2016**, 64, 1892-911	9	17
44	Morphological study of a connexin 43-GFP reporter mouse highlights glial heterogeneity, amacrine cells, and olfactory ensheathing cells. *Journal of Neuroscience Research*, **2017**, 95, 2182-2194	4.4	15
43	Augmentation of Ca(2+) signaling in astrocytic endfeet in the latent phase of temporal lobe epilepsy. *Frontiers in Cellular Neuroscience*, **2015**, 9, 49	6.1	15
42	Barreloid Borders and Neuronal Activity Shape Panglial Gap Junction-Coupled Networks in the Mouse Thalamus. *Cerebral Cortex*, **2018**, 28, 213-222	5.1	15
41	The NG2 Protein Is Not Required for Glutamatergic Neuron-NG2 Cell Synaptic Signaling. *Cerebral Cortex*, **2016**, 26, 51-7	5.1	14
40	Constitutive deletion of astrocytic connexins aggravates kainate-induced epilepsy. *Glia*, **2020**, 68, 2136-2147	9	14
39	Ultrastructural and functional characterization of satellitosis in the human lateral amygdala associated with Ammon's horn sclerosis. *Acta Neuropathologica*, **2009**, 117, 545-55	14.3	14

38	Molecular and functional properties of neurons in the human lateral amygdala. *Molecular and Cellular Neurosciences*, **2006**, 31, 210-7	4.8	14
37	Astrocytic TLR4 at the crossroads of inflammation and seizure susceptibility. *Journal of Cell Biology*, **2016**, 215, 607-609	7.3	14
36	Functional characterization of P2X3 receptors fused with fluorescent proteins. *Molecular Membrane Biology*, **2005**, 22, 497-506	3.4	13
35	Heterogeneity and function of hippocampal macroglia. *Cell and Tissue Research*, **2018**, 373, 653-670	4.2	13
34	Connexin30 and Connexin43 show a time-of-day dependent expression in the mouse suprachiasmatic nucleus and modulate rhythmic locomotor activity in the context of chronodisruption. *Cell Communication and Signaling*, **2019**, 17, 61	7.5	11
33	Astrocyte dysfunction in temporal lobe epilepsy. *Epilepsia*, **2010**, 51, 54-54	6.4	10
32	Uncoupling of the Astrocyte Syncytium Differentially Affects AQP4 Isoforms. *Cells*, **2020**, 9,	7.9	9
31	Collective cell migration of thyroid carcinoma cells: a beneficial ability to override unfavourable substrates. *Cellular Oncology (Dordrecht)*, **2017**, 40, 63-76	7.2	9
30	Characterization of cytoplasmic polyadenylation element binding 2 protein expression and its RNA binding activity. *Hippocampus*, **2015**, 25, 630-42	3.5	9
29	Limited contribution of astroglial gap junction coupling to buffering of extracellular K in CA1 stratum radiatum. *Glia*, **2020**, 68, 918-931	9	9
28	Differential regulation of chloride homeostasis and GABAergic transmission in the thalamus. *Scientific Reports*, **2018**, 8, 13929	4.9	8
27	Astrocytes and oligodendrocytes in the thalamus jointly maintain synaptic activity by supplying metabolites. *Cell Reports*, **2021**, 34, 108642	10.6	8
26	Astrocytic GABA Accumulation in Experimental Temporal Lobe Epilepsy. *Frontiers in Neurology*, **2020**, 11, 614923	4.1	7
25	TNF⊟Driven Astrocyte Purinergic Signaling during Epileptogenesis. *Trends in Molecular Medicine*, **2019**, 25, 70-72	11.5	7
24	AMPA receptors and seizures mediate hippocampal radial glia-like stem cell proliferation. *Glia*, **2018**, 66, 2397-2413	9	7
23	Role of Astrocytes in Epilepsy **2009**, 649-671		7
22	Connexin43, but not connexin30, contributes to adult neurogenesis in the dentate gyrus. *Brain Research Bulletin*, **2018**, 136, 91-100	3.9	6
21	New Phosphospecific Antibody Reveals Isoform-Specific Phosphorylation of CPEB3 Protein. *PLoS ONE*, **2016**, 11, e0150000	3.7	6

20	Neuron-glia interaction in epilepsy. *Journal of Neuroscience Research*, **2016**, 94, 779-80	4.4	5
19	Functional analysis of embryonic stem cell-derived glial cells after integration into hippocampal slice cultures. *Stem Cells and Development*, **2008**, 17, 1141-52	4.4	5
18	Altered splicing leads to reduced activation of CPEB3 in high-grade gliomas. *Oncotarget*, **2016**, 7, 41898-41912	5.5	5
17	Astrocytes and Epilepsy. *Neurochemical Research*, **2021**, 46, 2687-2695	4.6	5
16	Cell death of hippocampal CA1 astrocytes during early epileptogenesis. *Epilepsia*, **2021**, 62, 1569-1583	6.4	5
15	pH-Sensitive K(+) Currents and Properties of K2P Channels in Murine Hippocampal Astrocytes. *Advances in Protein Chemistry and Structural Biology*, **2016**, 103, 263-94	5.3	5
14	A Cellular Assay for the Identification and Characterization of Connexin Gap Junction Modulators. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	5
13	Anisotropic Panglial Coupling Reflects Tonotopic Organization in the Inferior Colliculus. *Frontiers in Cellular Neuroscience*, **2018**, 12, 431	6.1	5
12	Synaptic processes-The role of glial cells. Preface. *Brain Research Reviews*, **2010**, 63, 1		4
11	Lipoprotein receptor loss in forebrain radial glia results in neurological deficits and severe seizures. *Glia*, **2020**, 68, 2517-2549	9	3
10	Neuron–glia synapses in the brain: properties, diversity and functions of NG2 glia. *E-Neuroforum*, **2015**, 6, 73-77		2
9	Initiation of Experimental Temporal Lobe Epilepsy by Early Astrocyte Uncoupling Is Independent of TGFβR1/ALK5 Signaling. *Frontiers in Neurology*, **2021**, 12, 660591	4.1	2
8	NO-mediated signal transmission in bladder vasculature as a therapeutic target of PDE5 inhibitors. Rodent model studies. *British Journal of Pharmacology*, **2021**, 178, 1073-1094	8.6	2
7	Crucial Role for Astrocytes in Epilepsy **2015**, 2, 1-89		1
6	Ion channels in astrocytes **2004**, 187-213		1
5	Auxiliary Subunits Control Function and Subcellular Distribution of AMPA Receptor Complexes in NG2 Glia of the Developing Hippocampus. *Frontiers in Cellular Neuroscience*, **2021**, 15, 669717	6.1	1
4	Cx43 carboxyl terminal domain determines AQP4 and Cx30 endfoot organization and blood brain barrier permeability.. *Scientific Reports*, **2021**, 11, 24334	4.9	1
3	Crucial Role for Astrocytes in Epilepsy **2014**, 155-186		0

2 Physiology and Function of Glial Gap Junctions in the Hippocampus **2013**, 19-27

1	Response: Astrocytes as alternative targets for more efficient antiepileptogenic drugs. *Epilepsia*, **2021**, 62, 2299-2300	6.4